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PSYCHOLOGICAL LITERATURE.

Die moderne physiologische Psychologie in Deutschland, eine historisch-kritische Untersuchung mit besonderer Berücksichtigung des Problems der Aufmerksamkeit. W. HEINRICH. Zweite, teilweise umgearbeitete und vergrösserte Ausgabe. Zürich, Verlag von E. Speidel, 1899.

It is not easy to find a *raison d'être* for this work. As it is in the second edition it cannot wholly be attributed to what G. E. Müller calls a "*leichtfertige Productionssucht*," though the lack of constructive criticism, together with the remarkable number of critical errors, would seem to exclude any other theory. Assuredly, a critic who asserts that Külpe's "Grundriss" is scientifically of no importance (p. 151), whilst he refers the reader to Münsterberg's second "Beitrag" for a final solution of the time-sense problem (p. 64), would hardly be regarded by most psychologists as elected to fulfil the functions of the higher psychological criticism. The first 38 pages of the work are taken up with an historical introduction, running from the fall of Greek philosophy to Lotze; the necessity of such an introduction and its logical connection with the rest of the work are not obvious. In this historical introduction, however, the originator of Weber's Law is not considered.

In the preface Heinrich states that instead of applying his own opinions to the theories of others he proposes to use an objective standard of criticism in the shape of the doctrine of psychophysical parallelism. Beyond the general statement that the physical and psychical processes are to be considered separate, the reader is not informed what particular form of this doctrine Heinrich holds, until the close of the work, but is obliged to construct it from the several criticisms—a by no means easy task. But as weighed in this psychophysical balance, Fechner, Helmholtz, G. E. Müller, Pilzecker, Wundt and N. Lange, Külpe, Ziehen, Münsterberg, Ribot and Exner, are all found wanting. Avenarius alone stands the test.

The ground covered by Heinrich in his criticism of Fechner has, in the course of time, become pretty well trodden. There is one matter, however, in regard to which, perhaps, all psychologists are not clear, and which the counsel of Heinrich has made darker. In the early days of psychophysics von Kries objected to Fechner's theory of the direct measurability of a sensation by the liminal differences. His view was, as we now see, the correct one, that a sensation is not to be regarded as made up of a series of liminal difference units. Unfortunately he stated his objection in the form that one cannot say differences of sensation are like and therefore comparable. To this Fechner returned that differences of sensation could be compared, and that Plateau and Delbœuf had compared them. Heinrich's extraordinary criticism on Fechner's reply is to ask if the measurability of sensation is proven by experimental work (p. 51), and he lays it down hard and fast that differences of sensation are not comparable because they are not and cannot be 'given.' A logical deduction from this statement as well as from the assertion (p. 49) that different shades of red "appear quite as different as red and sweet," would be that the mental make-up of the author is fundamentally different from that of

all normal people. The correct view, as regards the first statement, probably is that Heinrich does not understand the import of the method of "mean gradations." He calls Fechner's view of the conservation of energy 'naïve': there is no doubt but that the view which Heinrich attributes to Fechner, viz., that the human body is "a system in which energy is directly transferable from the muscles to the brain" is naïve, but the naïveté is not Fechner's.

G. E. Müller's theory of attention Heinrich finds is out of date, and Pilzecker's elaboration of it is too schematic (p. 79). The mistake which Heinrich makes in regard to Müller's views of psychophysical interaction (p. 69) arises from Müller's use of the terminology of Lotze.

It is on Wundt, however, that the phials of critical depreciation are most copiously poured out. Among other things, Wundt's theory of psychophysical parallelism is said to be neither clear nor decided, and in different works we get different views. In support of this Heinrich cites passages from the *Physiologie*, *Psychologie*, from the *Essays*, and from the *Menschen-und Tierseele*. The writer does not find these passages contradictory; but it is hard to see why, if Heinrich was in doubt in regard to their meaning, he did not refer to Wundt's 'official' declaration in the treatise on "Psychical Causality and the Principle of Psychophysical Parallelism" in the *Phil. Studien* (B. X. S. 1 ff). Heinrich cites this article in another connection (p. 143), and it is almost incredible and certainly inexcusable that he should have taken the condensed and popular presentations of the theory in text-books or essays as a basis for criticism instead of the elaborate special treatise or even the discussion in the *Logik*. Again Heinrich finds that, according to Wundt, our consciousness is made up of ideas and sensations. Feeling being a quality of sensation (p. 104). Again and again Heinrich errs in this way; he either has not read other treatises necessary to an intelligent criticism of a writer, or he has failed to grasp their meaning. The chief points in Wundt which move Heinrich to an expression of critical approval are the "general laws of cerebral functions," and the "incisive attack on cerebral localization" (p. 95). In connection with Wundt, Heinrich criticises N. Lange's work on the *Fluctuations of Attention*: Heinrich finds that the conclusions drawn by Lange have been "shattered" by Münsterberg (p. 125), whilst the supplementary researches of Pace, Eckener, Marbe and Lehmann, are refuted by his own experiments.

Külpe fares quite as badly as Wundt. Besides holding, as noticed above, that Külpe's "Grundriss" is "scientifically of no importance," Heinrich finds that Külpe's own views rarely appear in his work, and when they do appear they are sterile. Külpe, we are told, tries to give us a descriptive psychology, but his habit of looking at things from the rationalistic standpoint has entangled him in the rationalism of Wundt's theory of apperception. Külpe may think he has treated his subject descriptively, but Heinrich warns him sharply that description is no mere "loose collocation." All this on p. 151. In consideration of this sort of criticism, Heinrich's complaint (in the appendix to the second edition) of the "authoritative tone" in Külpe's article on "Attention" (*Zeitschrift f. Phil. and philosoph. Kritik*, Bd. 110) has many of the elements of humor. Of Külpe's well-known chapter on "Reproduction and Association"—than which there is none weightier in any systematic treatise on psychology—Heinrich finds nothing better to say than that Külpe has failed to 'explain' the association processes physiologically.

In Münsterberg, however, Heinrich finds much to praise. Armed with the experimental method "Münsterberg stepped forth to the fray," *i. e.*, with Wundt; the result being that "Wundt's followers are steadily

decreasing." This result is probably as surprising to Münsterberg as to Wundt (p. 154). As contrasted with Wundt, Münsterberg is said to be freer from popular prejudice and keener in the analysis of his problems (p. 158). Still Heinrich finds Münsterberg wanting in the psychophysical test; in his discussion of association, for example, he limits himself to an analysis of the processes of consciousness instead of laying bare the underlying physiological processes. Ribot's theory of attention is criticised as representing Münsterberg's view.

Ziehen also is found not to be rigorous enough in the physiological side of his psychology (p. 175), in that he has asserted that there are factors in our mental life for which a material basis is wanting.

Even S. Exner's "Entwurf zu einer physiologischen Erklärung der psy. Erscheinungen" Heinrich does not consider strenuous enough physiologically; whilst in many ways he merits critical approval, still he too has "jumped over to consciousness" in his explanation instead of keeping to the nervous system.

With Avenarius's speculative views, so far as they can be applied to the concrete problems of psychology, Heinrich finds himself mostly in sympathy, and to an exposition of these views he devotes 23 pages.

The writer has thought he could better illustrate the worth of Dr. Heinrich's criticism by a résumé of his conclusions in regard to the authors he has discussed than by a critical review of his arguments—a long and probably not wholly profitable undertaking.

In regard to the way in which Heinrich has applied his psychophysical standard and his somewhat drastic treatment of Wundt, it may be considered an act of poetic justice to quote a passage from Wundt's *Logik*, written some time before the appearance of the first edition of "The Modern Physiological Psychology in Germany." In the second part of the "Methodenlehre" (2nd ed., p. 254), Wundt says "that a naïve ignorance of the actual standpoint of scientific thought is betrayed in the view sometimes found in psychological work, that, according to the principle of parallelism, a physical correlate belongs to every psychical process, and inasmuch as the physical chain of cause and effect offers the advantage of perfect continuity, a psychical process is really explained only when the corresponding physical processes are pointed out."

F. A.

Des Indes à la Planète Mars. Étude sur un cas de somnambulisme avec glossolalie. Par TH. FLOURNOY. Paris, F. Alcan, 1900. pp. xii, 420.

Under the above somewhat dramatic title we have a close, detailed and exhaustive study of a new case of automatism. The subject, known as Hélène Smith, is an unmarried woman of thirty years, strong, healthy, vigorous and, excepting the automatisms to be mentioned, presenting no apparent physical or mental abnormalities. She holds a responsible position as clerk in a mercantile house, and is of unimpeachable character. As a medium, she is unpaid and non-professional. She is not a spiritist nor member of any spiritist society, though she has steadfast faith in the objective character of her revelations. Her father was a talented linguist, the linguistic habit being inherited by Hélène only subconsciously, as primarily she has a distaste for languages, and knows only French. From her mother she inherited her disposition to automatism. As a young girl she led a subjective life, given to brooding, sadness, nervous fear, a feeling of estrangement, and an antagonism to her humble environment to which she felt herself superior. It is well to note also a kind of subjective inventive talent exhibited, for instance, in embroidery work in which her hands moved almost automatically.

Mlle. Smith's automatism did not begin until she was about twenty-